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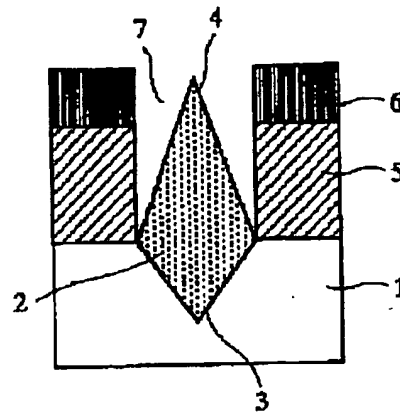
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APPLICANT : FUJITSU LTD;

INVENTOR : KUMASAKA FUMIAKI;

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TITLE : FIELD EMITTER AND MANUFACTURE THEREFOR



ABSTRACT : PROBLEM TO BE SOLVED: To manufacture a fine field emitter with a high manufacturing yield and with excellent reproducibility by constituting an exposed surface of the emitter out of a Ta film accumulated in an inclined part of a recessed part arranged on a base board.

SOLUTION: In a field emitter, at least an exposed surface of an emitter 4 is constituted of a Ta film accumulated in an inclined part 3 of a recessed part 2 arranged on a base board 1. When the Ta film is accumulated on the base board 1 having the recessed part 2 whose side wall becomes the inclined part 3, an α Ta film is formed in the inclined part 3, and a β Ta film is formed in a flat part, but since the α Ta film accumulated in the inclined part 3 has large resistance to dry etching, only the α Ta film can be selectively left by performing maskless dry etching. When the recessed part 2 is a V-shaped cross section, the emitter 4 is formed only of the α Ta film.

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